

Ergonomics

dates in the nature of vesicles, papules, and vesicular blisters
- dermatitis. Kop. rate, first test, 100% (100%)
- 1st Dose 100% (100%)

... I am not surprised by such a result, because it is well known that the Δ -function approximation is not appropriate for the case of a small number of particles.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012408

PIGON, Halina; MARCHUT, Maria

Determination of urinary estrogens using Brown's method with
the application of domestic reagents. Endokr., Pol. 14
no.6:527-536 N-D '63.

1. Katedra Fizjologii Zwierząt Wyższej Szkoły Rolniczej w
Krakowie (Kierownik: Prof. dr Z. Ewy) i Katedra Chemii Organicznej
Akademii Medycznej w Krakowie (Kierownik: Prof. dr W. Kahl).

REVIEW, APPROVAL AND SIGNATURE: [REDACTED], V.P.

Effect of well-known rates on the efficiency of the
of May 1961. Ref. know. [REDACTED] Ag. [REDACTED]

PIGRONI, V.M.

Borehole types and the magnitude of bending forces determining
their classification. Uch. zap. AGU. Ser. geol.-geog. nauk
no.6:17-26 '60. (MIRA 1b:7)

(Azerbaijan--Boring)

PIGROV, V.M.

Freezing of drilling tools, logging tools, and geophysical
apparatus in wells and means of controlling it. Azerb. neft,
khoz. 41 no.12:11-16 D '62. (MIRA 16:7)

(Oil well drilling--Equipment and supplies)
(Oil well logging--Equipment and supplies)

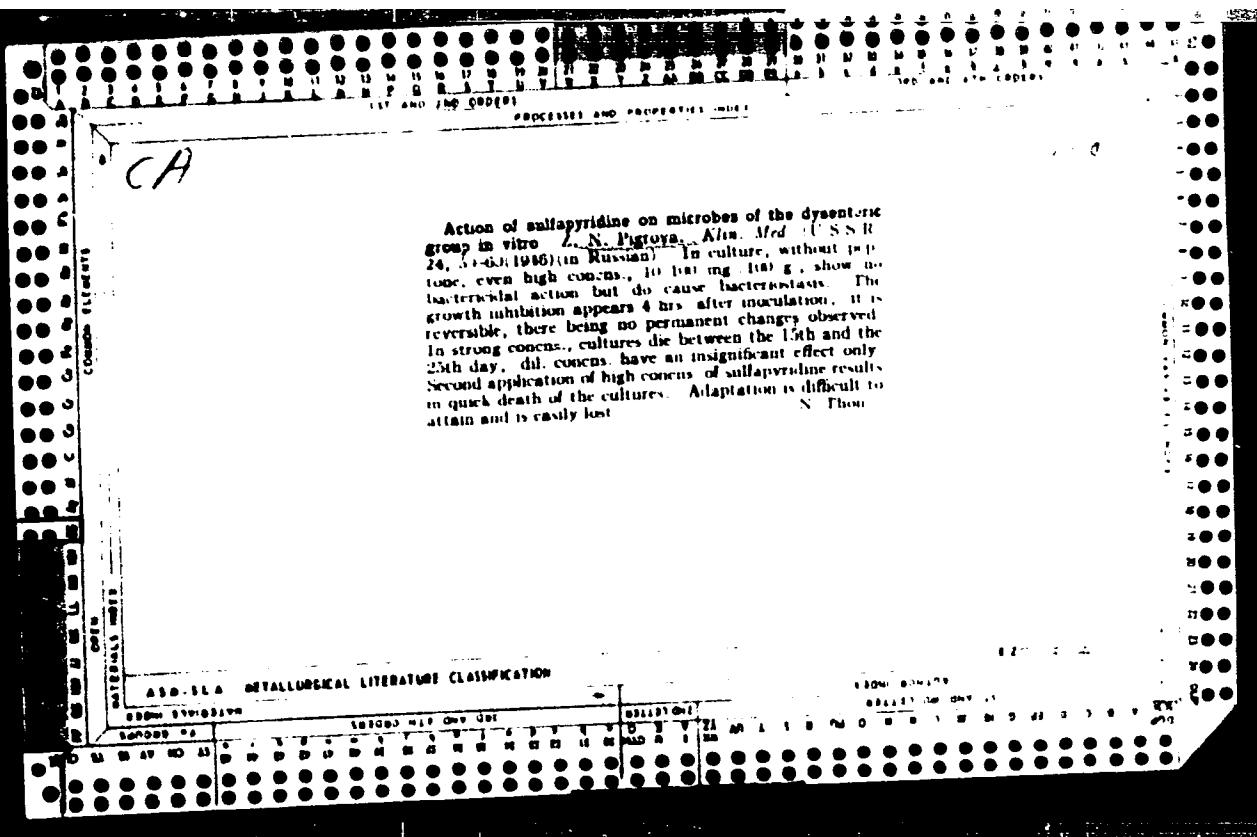
2/163/62 CCC 005 078 0/1
B228-B307

AUTHORS: Mignov, V. N. and Kul'jev, S. A.

TITLE: The question of tentatively distinguishing collectors from logging data in deep and superdeep wells.

PUBLICATION: Referativnyj zhurnal, Geofizika, no. 5, 1982, p. 5.
Abstract DA287 (Sb. nauchno-tehn. inform., no. 10,
N.-1. in-t po nefti nefti, no. 3 spec., 1982, 4 p.).

TEXT: As a result of the usual complications in logging deep and superdeep wells it is not always possible to conduct the full complex of geophysical investigations in such wells. In order to distinguish collectors in the sections of these wells, the authors propose that standard logging should be conducted throughout the measured interval, and that the impedance diagram be compared with those previously recorded. In the conditions of the Apsneronskij Peninsula's oil fields the collectors are marked on the multiple logging diagrams by reduced impedances; this is due to the penetration into them of a clay solution filtrate, whose depth increases with time. /Abstracter's note: Complete translation./
Card 1/1



PIGULEVSKAYA, L.; RAKOVSKIY, V. Ye.; BATURA, V. A.

"Types of humus fuel and their formation."

Report submitted for the 2nd International Peat Congress, Leningrad,
15-22 Aug 63.

RAKOVSKIY, V.Ye.; PIGOLEVSKAYA, L.V.

Evolution of the atmosphere, plants and fuel. Dokl. AN BSSR
7 no.10:688-692 O '63. (MIRA 16:11)

1. Institut nauchno-tekhnicheskikh issledovanii AN BSSR.

PIDOPLICHKO, A.P.; PIGULEVSKAYA, L.V.; KONOYKO, M.A.; CHISTOVA, L.R.

Comparative estimate of the natural resources of raw bituminous peat. Trudy Inst. torfa AN BSSR 7:73-89 '59. (MIRA 14:1)
(Peat)

BELKEVICH, P.L. [Bial'kevich, P.L.]; PIGULEVSKAYA, L.V. [Pihuleuskaia,
L.V.]

Vladimir Evgen'evich Rakovskii; on his 60th birthday. Vestsyi
AN BSSR. Ser. Fiz.-tekhn. nav. no. 4:141-144 '60. (MIRA 14:1)
(Rakovskii, Vladimir Evgen'evich)

SASIN, A.S.; BEL'KOVICH, P.I.; PIGOLEVSKAYA, L.V.

Detarriing raw peat wax by the crystallization method. Trudy Inst.
torf. AN BSSR 9:301-306 '60. (MIRA 14:2)
(Waxos) (Peat)

PIGUZEVSKAYA, L. V.

ДИВИЗІОН ОФОРМЛЕННЯ
ІМІДЖУСІКІХ ТОВІРІВ

Д. В. Панасюк, Н. М. Нікітіна, В. Г. Борисюк,
Н. А. Панасюк, А. В. Нікітіна, В. А. Борисюк

VIII Mendeleyev Congress for General and Applied Chemistry is
Section of Chemistry and Chemical Technology of Russia,
publ. by Acad. Sci. USSR, Moscow 1959

Abstracts of reports scheduled to be presented at above mentioned congress,
Moscow, 10 March 1959.

PIGULEVSKAYA, L.V.; RAKOVSKIY, V.Ye.

Changes in the chemical composition of individual types of peat in relation to their age. Age and changes in the composition of bitumens in peat. Report no. 2. Trudy Inst. torf. AN BSSR 6: 110-122 '57.
(Peat--Analysis) (Bitumen--Analysis) (MIRA 11:?)

PIGULEVSKAYA, L.V.; RAKOVSKIY, V.Ye.

Changes in the chemical composition of individual types of peat
in relation to their age. Effect of age on the amount and composition
of humic acids in peat. Report no. 3. Trudy Inst. torf. AN BSSR
6:123-129 '57. (MIRA 11:7)
(Peat--Analysis) (Humic acid--Analysis)

PIGULEVSKAYA, L.V.; RAKOVSKIY, V.Ye.

Chemical composition of peat-forming accumulations and
its effect on the composition of the peat. Trudy Inst. torf.
AN BSSR 6:3-11 '57.

(Peat)

(MIRA 11:7)

PIGULEVSKAYA, L.V.; RAKOVSKIY, V.Ye.

Changes in the chemical composition of individual types of
peat in relation to their age. Age and changes in the content
of constituent parts of peats. Report no. 1. Trudy Inst. torf.
AN BSSR 6:12-31 '57. (MIRA 11:6)
(Peat)

PIGULEVSKAYA, L. V.

PIGULEVSKAYA, L. V. -- "Changes in the Chemical Composition of Individual Types of Peat as a Function of Their Age." Acad Sci Belorussian SSR. Department of Physicomathematical and Technical Sciences. Minsk, 1955. (Dissertation for the Degree of Candidate of Chemical Sciences.)

SO: Knizhnaya letopis', No. 4, Moscow, 1956

KHAMITOVA, V.Z.; TULYAKOV, I.V.; PIGULEVSKAYA, M.L.

Silicosis and age. Trudy Inst. kraev. pat. AN Kazakh. SSR 9:
12-14'61. (MIRA 16:7)
(LUNGS—DUST DISEASES) (AGE AND EMPLOYMENT)

PIGULEVSKAYA, M.L.

Some problems of industrial hygiene in extracting lead-zinc
and lead-zinc ores. Izv. Akad. Kazakh. SSR. Ser. med. nauk II
no.3:50-53 '64. (MINA 18:1)

PIGULEVSKAYA, M.L.

Effect of lead-barite and lead-zinc mine dust on the lungs
of experimental animals. Izv. AN Kazakh. SSR. Ser. med.
nauk no. 3:30-37 '63. (MIRA 17:1)

PIGULEVSKAYA, M.L.

Pneumoconiosis in lead and barite mines of Kazakhstan. Trudy
Inst.kraev.pat. AN Kazakh.SSR 10:13-15 '62. (MIN)
(KAZAKHSTAN--LUNGS--DUST DISEASES) (MINE DISEASES)

PIGULEVSKAYA, M.L.

Influence of manganese in the rise of silicosis. Trudy Inst. kraev.
pat. AN Kazakh. SSR 8:15-20 '60. (MIRA 14:5)
(MANGANESE--PHYSIOLOGICAL EFFECT)
(LUNGS--DUST DISEASES)

TULYAKOV, I.V.; KHAMITOVA, V.Z.; PIGULEVSKAYA, M.L.

Silicosis at a gold mine in Kazakhstan. Trudy Inst. kraev. pat.
AN Kazakh. SSR 8: 56-61 '60. (MIRA 14:5)

(LUNGS—DUST DISEASES)
(KAZAKHSTAN—GOLD MINES AND MINING—HYGIENIC ASPECTS)

PIGULEVSKAYA, N. V.

"Interaction Between Lycopersicum Esculentum and Datura Stramonium in the Case of Grafting," Sov. Agro-Bot. Rev., No. 1, 1964.

cl-41-

CHERIKOVSKAYA, Tereza Yakovlevna; PIGULEVSKAYA, Nataliya Nikolayevna;
POLYAKOV, N.G., doktor med. nauk, red.; MANIKOV, N.Ye., red.;
ROMANOVA, Z.I., tekhn. red.

[Concise methodological manual on biological standardization
of cardiotonics and valerian] Kratkoе metodicheskoe posobie po
biologicheskoi standartizatsii serdechnykh sredstv i valer'iany.
Pod red.N.G.Polyakova. Moskva, Gos. izd-vo med. lit-ry Medgiz,
1960. 90 p.
(BIOLOGICAL ASSAY) (CARDIAC GLYCOSIDES) (VALERIAN)

PIGULEVSKAYA, N.N.; POLYAKOV, N.G.; CHERIPOVSKAYA, T.Ya.

Study of the possibility of using cymarin as a standard for
the biological evaluation of Adonis preparations. Apt. delo
9 no. 4:51-55 JI-Ag '60. (MIRA 13:8)
(CYMARIN) (ADONIS)

PICULEVSKAYA, N.N., mladshiy nauchnyy sotrudnik

Methods of processing dry medicinal forms and plant raw materials from oleander, Indian hemp, and Erysimum for the purpose of their biological evaluation. Sbor.nauch.trud TSANII 2:168-173 '61.
(MIRA 1645)

1. Laboratoriya biologicheskoy i khimicheskoy standartizatsii lekarstv (rukoveditel' laboratorii - doktor med.nauk, prof. N.G. Polyakov) Tsentral'nogo aptechnogo nauchno-issledovatel'skogo instituta.

(CARDIOVASCULAR AGENTS) (BIOLOGICAL ASSAY)

PIGULEVSKAYA, N.N.

4770. Biological activity of various preparations of valeren
Unichur. T. J. Tserikovskaja, N. N. Pigulevskaja, and E. F.
Pjatnitskaja *Apt. Delo*, 1955, No. 4, 42-44; *Referat. Zh. Biol.*
1956, Abstr. No. 51887. (Rusian) R. SCHACHTER 3

PIGULEVSKAYA, N.V.

Iran in the third century A.D. and the rise of cities. Uch.zap.
Len.un.no.195:114-122 '56. (MLRA 10:2)

1. Chlen-korrespondent AM SSSR.
(Iran--Cities and towns)

AUTHOR: Pigulevskaya, N. V., Curr. reading material AS USSR 30-1a-14/45

TITLE: The International Convention of Orientalists
(Mezhdunarodnyy kongress vostokovedov).

PERIODICAL: Vestnik AN SSSR, 1957, Vol. 27, Nr 12, pp. 10-13 (USSR)

ABSTRACT: The regular 24th Congress of orientalists took place at Munich from August 28 to September 4th. It was attended by 1200 persons. At the head of the Soviet delegation consisting of 20 persons was the director of the Institute for Orientalism of the AN USSR B. G. Safurov. Unfortunately many important oriental states were not represented, such as the Chinese Peoples' Republic, the Democratic Republic of Vietnam, India, and Burma. The main work of the Congress was carried out in 14 sections. The Soviet delegates delivered their lectures in nearly all sections. The lecture by V. I. Avdiyev on the cultural connections between Egypt and the neighboring states during the 11th and 1st centuries before the new era was delivered in the section for Egyptology. In the sessions dealing with cuneiform characters contributions were made by B. J. Iliotrovskii ("Achievements in the Field of the Investigation of Urartu Civilization"), G. A. Melikishvili ("The Study of Urartu Epigraphy") and I. M. D'yakonov ("A Comparative Grammatical

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The International Convention of Orientalists.

30-11-14 '45

Survey of the Chaldean and Urartian Languages"). In the section for Islamic Science V. I. Belyayev spoke about the unique manuscript of the Arab historian as-Suli and on the reasons for the sectarian movements in Islam during the 7th century. A. K. Ali-Zade lectured on the Agrarian system in Azerbaijan in the 8th and 9th centuries. In the section for Turkish Science A. S. Tveritinova told about the unique manuscript of the Turkish historian Hodzha Hussein "Bedai-ul-Hukm". In the section for Iran, the Caucasus, and the neighboring countries A. G. Mirzoyev spoke about the "Author of the "Shah-in-Shah-Name"" and B. G. Gafurov lectured on the "Founding of the State of the Samanides". In the section for the study of central Asiatic problems I. S. Braginskiy spoke about "The Study of the Activities of Kamel Hudzhandi" in connection with the preparation of the critical text of his "Divan", and N. N. Belenitskiy about "The Art of Ancient Sogd (7th and 8th centuries) in connection with the excavations recently made at Pyandzhikent". In the section for Eastern Asia the lecture delivered by P.F. Topuridze on the "Economic conditions for the Meiji Revolution" gave rise to a lively discussion. In the section for South East Asia A. A. Gruber spoke about "The Problem of the Peculiar Character of Class Formation in Indonesia".

Card 2/4

The International Convention of Orientalists.

30-12-14/45

up to 1945". In the section for African and Arab studies, A. M. Cl'derogee spoke about "The Nature and the Imperial Role of the Rising under Osman Foddy" for the History of the "Hausa" (Khalasa). Numerous important information and lectures were contributed by the representatives of the Arab countries. The lectures of Soviet research workers on the problems solved by Soviet scientists met with general interest. Particular interest was created among the participants by what was said about the study of Eastern manuscripts in the West and the excavations of Soviet archeologists. Great importance must be attached to the meetings between the scientists outside the sessions. There was good understanding in the discussions with the scientists of Arab states. Between Soviet and British orientalists friendly relations had existed already since the 23rd convention. The same friendly relationship was established with French, Belgian, Iranian, and Afghan delegates as well as with the delegates from Ceylon and with some delegations from the U.S.A. On the last day of the Convention in Berlin a reception of the German delegates took place. A distinct sign for the acknowledgment of the merits of Soviet orientalists was the unanimous decision of the consultative and general assemblies to convene the next convention of orientalists in Berlin and.

Card 3/4

The International Convention of Orientalists.

X-1--14/45

AVAILABLE: Library of Congress

- 1. Culture--USSR
- 2. Culture--Egypt
- 3. History--Arabia
- 4. History--Turkey

Card 4/4

PIGULEVSKAYA, N.N., mladshiy nauchnyy sotrudnik

Sensitivity of two types of frogs (*Rana temporaria* and *Rana ridibunda*) to preparations of *Convallaria majalis* and *Adonis vernalis*. Apt.delo 9 no.1:55-58 Ja-F '60. (MIRA 13:6)

1. Iz laboratorii farmakologii.
(FROGS) (LILIES OF THE VALLEY) (ADONIS)

CHERIKOVSKAYA, T.Ya.; PIGULEVSKAYA, N.N.; PYATNITSKAYA, Ye.P.

Biological action of valerian preparations. Apt.delo 4 no.4:42-44
J1-Ag '55. (MLRA 8:10)

1. Iz laboratorii farmakologii TSentral'nogo nauchno-issledovatel'skogo aptechnogo instituta (TsANII) Glavnogo aptekopravleniya Ministerstva zdravookhraneniya SSSR.

(VALERIAN, effects,
standard)

SOV/ 49-58-11-10/18

AUTHORS: Dedysheva, T. V., Pigulevskaya, V. B. and Rodionov, P. F.

TITLE: Adaptability of Methods of Electro-Prospecting for Pyrite
in Metamorphic
Formations Occurring

Rocks and Slates of the Urals (O primenimosti
kompensatsionnykh metodov elektrorazvedki dlya poiskov
kolchedannykh mestorozhdeniy Urala, zalegayushchikh
sredi metamorficheskikh porod i slantsev)

PERIODICAL: Izvestiya Akademii Nauk SSSR. Seriya Geofizicheskaya
1958, Nr 11, pp 1374-1382 (USSR)

ABSTRACT: Comparative analysis of the materials obtained from the
electro-prospecting carried out in the Central Ural
resulted in some important conclusions. One of them is
that owing to the varying thickness of deposits, the
compensation method cannot practically define a uniform
field. The complex character of the field obtained did
not allow tracing the origin of the irregularities in the
ore distribution, even in the shallow deposits in such
localities as Yuryev, Slonov, Shaytan. Also, due to the
complexity of the field, it was difficult to establish the
right spread of the cable, therefore, often some parts
of the surveying zone were omitted (Figs. 3-6). It was

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SOV/ 49-58-11-10/18

*Adaptability of Methods of Electro-prospecting for Pyrite Formations
Occurring in Metamorphic Rocks and Slates of the*

Ural

observed that the various factors, other than those for the ores, were affecting the measurements carried out by the compensation method over the metamorphic rocks and slates. In addition, due to the small distance between the electrodes, it was difficult to determine the area of increasing or decreasing electro-conductivity, even for shallow layers of less than 50 m. Therefore, if an indirect relation between the ore layers to the shallow deposits is required, the method of compensation and its variation, the method of vertical field, cannot be employed even if the irregularities of conductivity are checked by means of the isolines (Figs. 1 and 2) through holes drilled deep into the ore layers (Pianko-Lomov and Teplov). In the case of the disturbed field where the layers of metamorphic rocks and slates affect the electro-conductivity, it is impossible to determine the irregularities of small intensity (range of 10%) related to the ore layers below 50-100 m. It can be said then that the limitations of the compensation method in searching for deep ore layers, described by Ovchinnikov (Refs. 1-6)

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SOV/ 49-58-11-10/18

Adaptability of Methods of Electro-Prospecting for Pyrite Formations
Occurring in Metamorphic Rocks and Slates of the

Ural

for the Karabash region, can be extended to all areas of the Central Ural. It should be added that this applies also to the shallow (less than 50 m) formations where the metamorphic rocks and slates are present. As a result of the investigations, it is advisable to abandon the methods of compensation and vertical field in electro-surveying when searching for the pyrite formations deposited in metamorphic rocks and slates. There are 6 figures and 6 references, all of which are Soviet.

ASSOCIATIONS: Ural'skiy filial AN SSSR, Gorno-geologicheskiy institut (Ural Branch of the Ac.Sc. USSR, Geological Institute) and Soyuznyy Ural'skiy geofizicheskiv trest Bazhenovskaya geofizicheskaya ekspeditsiya (All-Union Ural Geophysics Trust, Bazhenov Geophysics Expedition)

SUBMITTED: October 4, 1957

Card 3/3

PIGULINSKAYA, Yevgeniya Aleksandrovna; PLEVNIK, Ya.A., kand.ekonom.nauk,
otv.red.; ZIMENKOV, G.I., red.issd-vs; KISELEVA, A.A., tekhn.red.

[Renewal of capital assets in Japanese industry and the development
of the postwar cycle] Obnovlenie osnovnogo kapitala ispolo-
skoi promyshlennosti i razvitiye poslevoennogo tsikla. Moskva,
Izd-vo Akad.nauk SSSR, 1960. 255 p. (MIRA 13:5)
(Japan--Finance)

PIGULEVSKIY, D.A.

Professor Iakov Borisovich Kaplan. Vest. oto-rin. 17 no.2:94 Mr-Ap
'55. (MLRA 8:7)

(OBITUARIES,
Kaplan, Iakov B.)

*PICULEVSKIY, D.A.
OSIPova, P.V.; PICULEVSKIY, D.A.*

Clinicomicrobiological characteristics of chronic tonsillitis.
Zhur.mikrobiol.evid. i immun.28 no.12:7-9 D '57. (MIRA 11:4)

1. Iz Instituta eksperimental'noy meditsiny AMN SSSR i kliniki
bolezney ucha, gorla i nosa I Leningradskogo meditsinskogo instituta
imeni I.P. Pavlova.

(TONSILLITIS, microbiology,
clin. aspects (Rus)

OSIPOVA, P.V.; PIGULEVSKIY, D.A.

Serological characteristics of chronic tonsillitis. Zhur.
mikrobiol.epid. i immun. 30 no.5:71-75 My '59. (MIRA 12:9)

1. Iz Instituta eksperimental'noy meditsiny AMN SSSR i kliniki
bolezney ucha, gorla i nosa I Leningradskogo meditsinskogo
instituta imeni Pavlova.
(TONSILLITIS, immunol.
serol. reactions (Rus))

PIGULINSKIY, D.A., kand.med.nauk

Significance of allergy in the pathogenesis of chronic tonsil-litis. Vest. AMN SSSR 15 no.1:44-52 '60. (MIRA 13:6)

1. Leningradskiy meditsinskiy institut imeni akad. I.P. Pavlova
1 Institut eksperimental'noy meditsiny AMN SSSR.
(TONSILLITIS etiol.)
(ALLERGY)

PIELEVSKIY, D.A., 1900-1940, male

Dwelling place: 100, Krasnaya Street, Moscow, Russia
Family name: Pilevskiy, first name: D.A.
Date of birth: 1900-01-01 (U.S. 1900)

PAVLOVA, I.P.; IVANOV , A.I.; FIGULEVSKIY, D.A.

Docent Anatolii Aleksandrovich Sakharov (On his 60th birthday.
Vest. otorin. no.6:106 '61. (MIRA 15:1)
(SAKHAROV, ANATOLII ALEKSANDROVICH, 1901-)

VOTACHEK, V. I.; KSILOV, K. L.; LIKHACHEV, A. G.; PIGULEVSKIY, D. A.

Professor Vil'gel'm Fomich Undrits; on the 70th anniversary of
his birth. Vest. otorin. no.1:3-6 '62. (MIRA 15:7)

(UNDRITS, VIL'GEL'M FOMICH, 1891-)

PIGULEVSKIY, D. A.

Cand Med Sci - (diss) "Pathogenesis and clinical aspect of chronic tonsillitis. (Experimental-clinical studies)." Leningrad, 1961.
23 pp; (Leningrad State Order of Lenin Inst for Advanced Training
of Physicians imeni S. M. Kirov); 250 copies; price not given;
(KL, 5-61 sup, 205)

L 05258-67 ARG/EEC(k)-2/EWP(c)/EWP(h)/EWT(d)/FBO/FSS-2 IJP(c) DE/JT

ACC NR: AM6016656

Monograph

UR/

Zhakov, Aleksandr Mikhaylovich; Pigulevskiy, Flaviy Aleksandrovich

65
C+1

Guidance of ballistic rockets (Upravleniye ballisticheskimi raketami) Moscow, Voenizdat M-va obor. SSSR, 1965. 277 p. illus., biblio. 8000 copies printed.

TOPIC TAGS: ballistic missile guidance, missile stability, missile trajectory, automatic control equipment, remote control system, command and control system

PURPOSE AND COVERAGE: The book is intended for officers of the Soviet armed forces in the fields of engineering and technology and for rocketry students. The authors discuss ballistic-missile guidance in detail. The first chapter covers ballistic-missile trajectories, target accuracy, and rocket dispersion, shown in tables and diagrams, as well as the lateral motion and ranges of ballistic missiles. In the second and third chapters the authors discuss guidance theory, angle of stabilization, and the control of motion dynamics. The last four chapters deal with electronic systems, velocity and position measurements, and command transmissions from control centers. The book has numerous diagrams and illustrations.

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UDC: 623.451.8:62-50

L 05258-67

ACC NR: AM6016656

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- Ch. II. Basic information on analysis of dynamic systems -- 72
- Ch. III. Stabilization of missile axes -- 101
- Ch. IV. Motion control of a missiles mass center. Radio correction systems for lateral divergence -- 146
- Ch. V. Measurements of missile coordinates in radio-control command systems -- 174
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SUB CODE: 19/ SUBM DATE: 29Sep65/ ORIG REF: 031/ OTH REF: 011

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PIGULEVSKIY, G.V.; BAKINA, L.A.

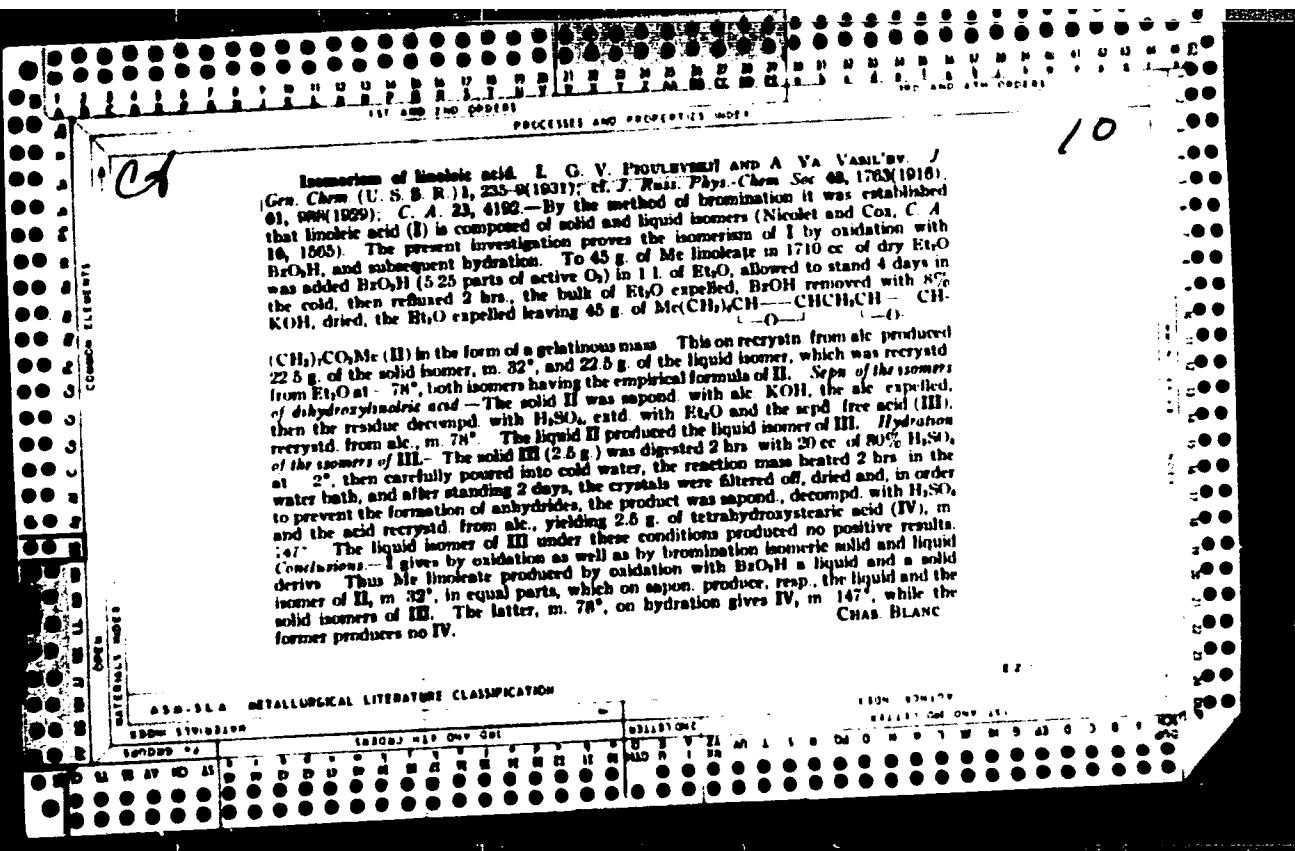
Composition of the oxygen-containing fraction of ethereal
oil of *Libanotis transcaucasica* Schischk. Zhur. prikl.
khim. 38 no.5:1113-1117 My '65. (MIRA 18:11)

Estimation of anilines in the air. G. V. PIOTRKOVSKI AND I. N. PETROVA *Arb. russ. Fiz.-Khim. Sekt. Leningrad Akad. Nauk SSSR*, No. 2, 310 (1927). The air is passed through a CaCl_2 tube (20 cm long which is fitted with 5.0 g. of glass wool and 10% H_2SO_4). In some experiments the Tischenko type of flask was used. The detection of the aniline absorbed by the H_2SO_4 was accomplished by the method of Lehmann. The use of the CaCl_2 tube instead of the Palmer tube or the Tischenko flask has the advantage of allowing a rapid passage of the aniline saturated air. B. S. LAVINE

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012408

The determination of benzene in the air by means of silica gel. G. V. PROKOPENKO AND A. K. YAKOVLEVNA. *Avt. usz. Fizich. Sist. Lengvag. Akad. Nauk SSSR*, 17, 2, 305-9 (1927).—Air was passed through a Tsirochenko flask coated H_2SiO_3 (drying flask), then through a soda lime tube and two $CaCl_2$ -contg. tubes and finally a tube contg. phosphoric anhydride. The air was then passed through a U-shaped tube contg. a weighed amt. of benzene. The air contg. with benzene vapor was then passed through 2 U-shaped tubes contg. silica gel and again through a Tsirochenko flask. Seven determinations were recorded, each with a total vol. of 40 l. of air. The % of vaporized benzene absorbed by the silica gel from the air varied between 0.4% and 0.9%. Two of the tubes contg. silica gel were used twice and two 3 times. It is suggested that no more than 3 absorptions be performed with the same reagent. Used silica gel can be freed from the benzene by heating it to 150° and passing purified air for 1 hr. A portable app. for use in factories and oil establishments is described and a photograph shown. B. S. L.

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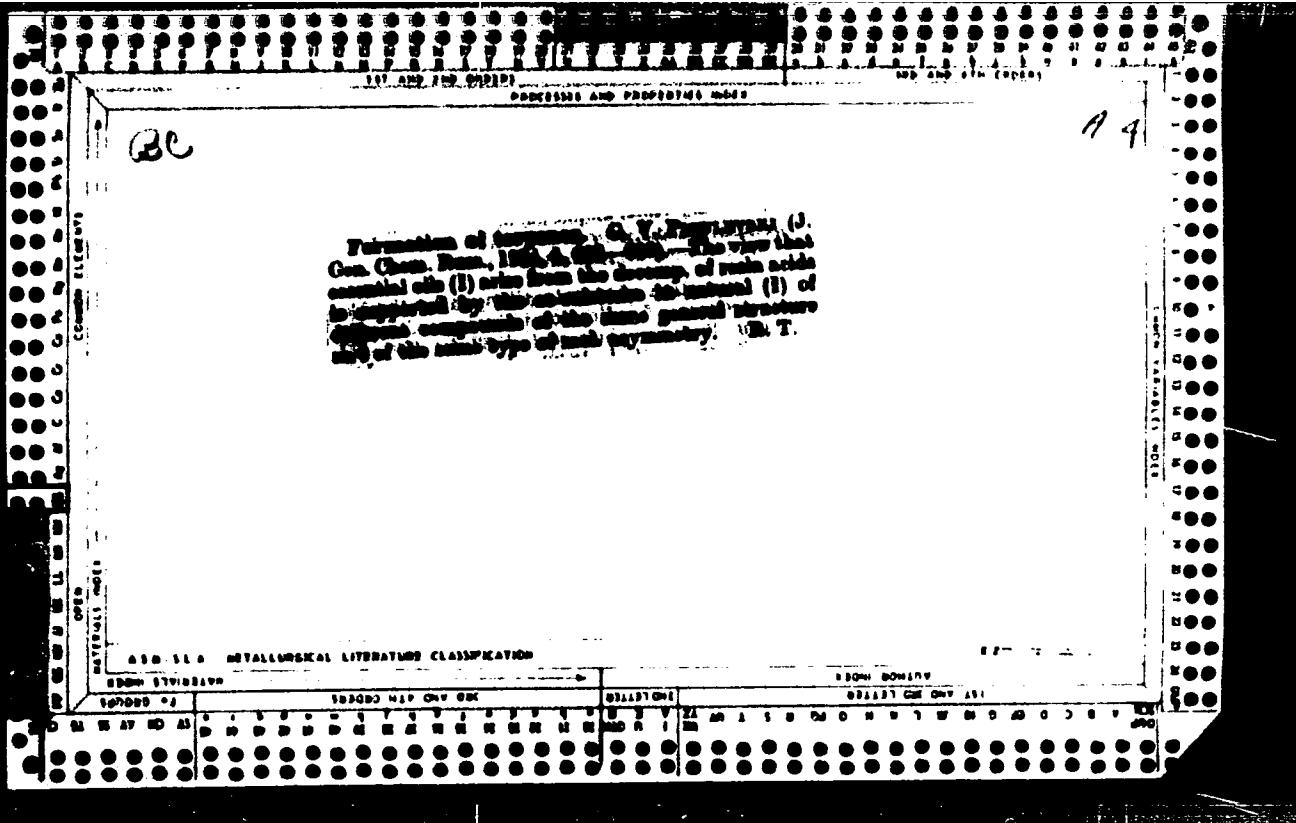


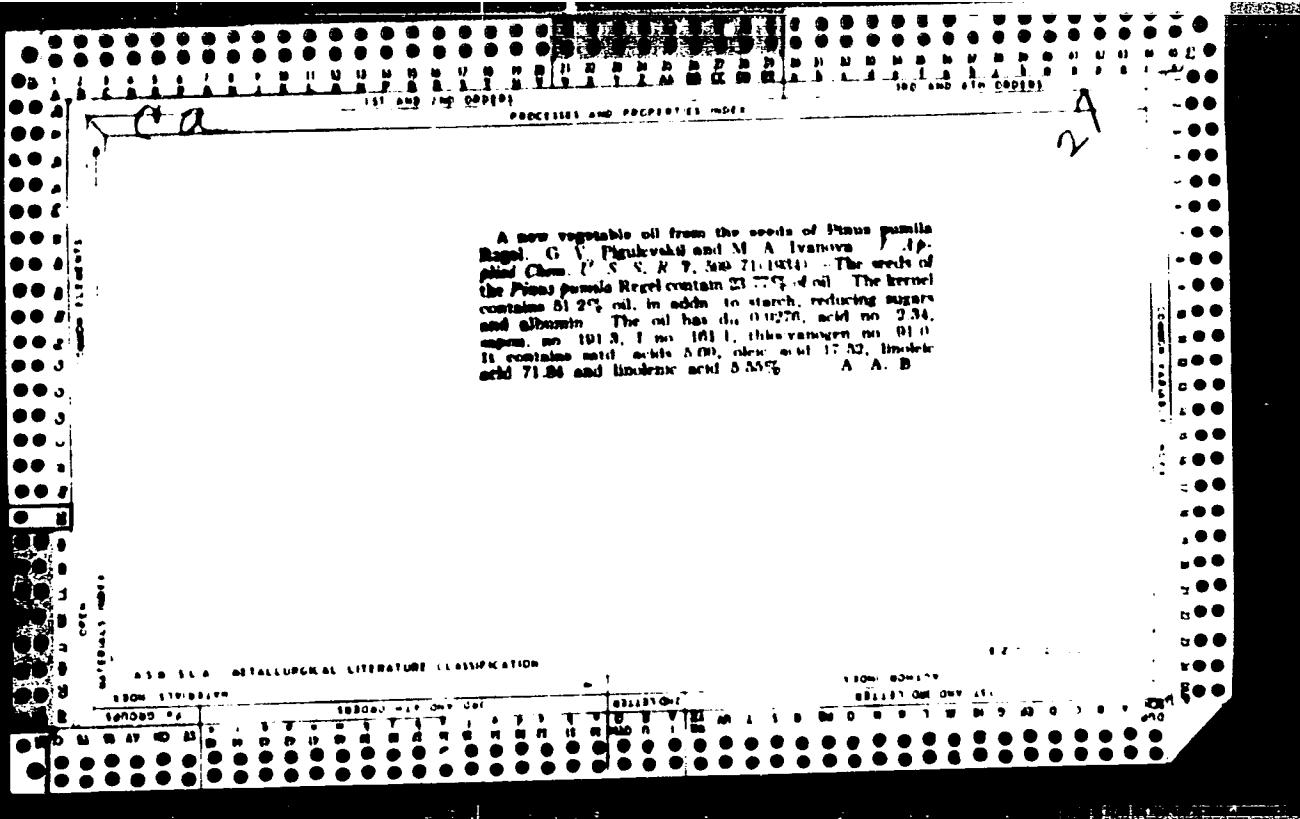
SEVENTEEN. *J. Gen. Chem. (U. S. S. R.)* 2, 80-3 (1933).—The fruit of *Siam latifolium* gives 7.64% of an essential oil consisting of 89% limonene and about 6% of perillic anhydride, b. 107-8°, d. 0.9348, [α]_D 130.23°, which closely resembles perillaldehyde. The oil also contains 0.8% of a high-melting substance, [α]_D 23.10°. CRAU BLANC.

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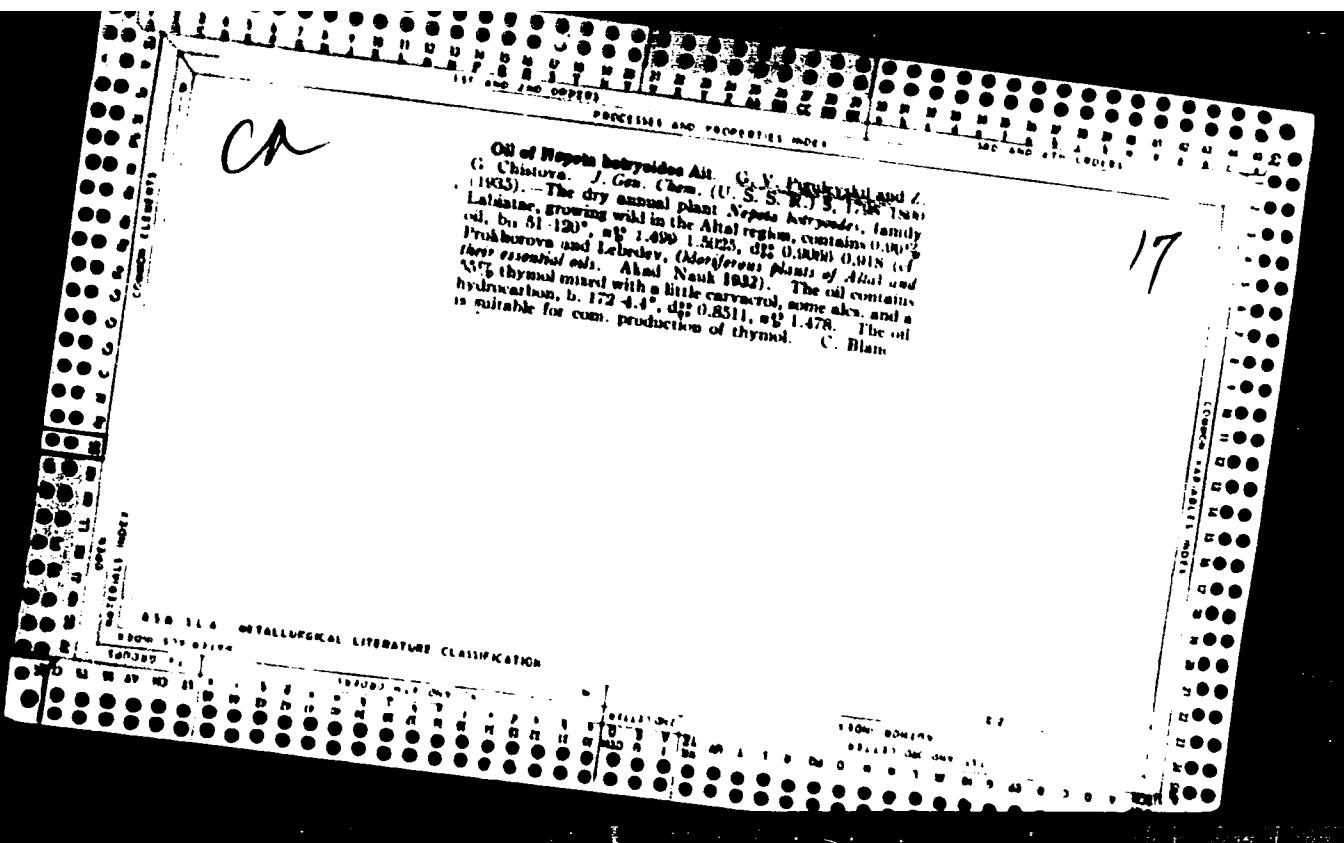


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110

Influence of climatic conditions on the resin contents of conifers. G. V. Pigulevskii. J. Gen. Chem. (U.S.S.R.) 5, 1030 (1935); cf. Transl. State Naukova Kap. Bot. i Zool. 10, 3 (1959). A study of 13 varieties of *Pinus* and 5 varieties of *Abies* of European, Asiatic and American habitats showed that the resin contents of conifers of the northern zone are greater than those of southern zone *Pinus sibirica* 13%, *Pinus contorta* 6%, *Abies sibirica* 12.9%, *Abies pungens* 5.08%), with the moderate zone species occupying the intermediate position. Chas Blans

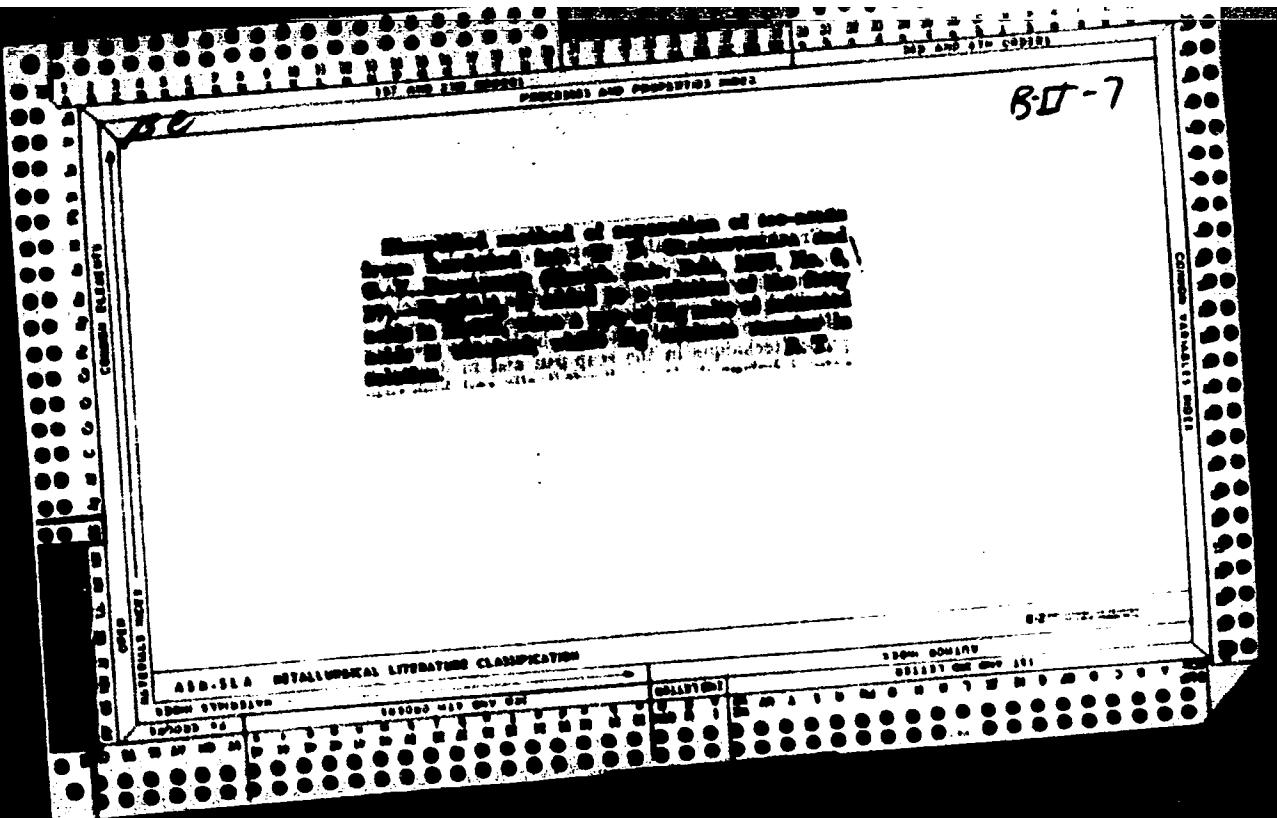
1 - New Age (LSD)



A new method of extraction of rubber from the rubber-bearing plants. G. Pugazhenthi and K. Kmarthayam
J. Rubber Ind. (V. S. S. R.) 12, 1133 (1985). The leaves of the rubber-bearing Kenduri plant have the following percentage compn.: mono- and di-saccharides 8.09, starch 11.6, pentosans 0.2, cellulose 6.74, lignin 11.91, albumin 12.42, tannins 8.01, acetone-sol. substances (tare) 30.0, C₁₄ h sol. substances (tare) 2.3, ash 13.00 (0.56 0.02). The leaves were finely ground and treated with petro. ether (or C₆H₆, trichlorethylene, etc.) and subjected to a pressure of 200-300 atm. This operation was repeated and the liquid was treated with alk. or acetate to precip. rubber. The proportion of solvent used was 4 parts to 1 part of the leaves. A. Pestoff

Investigation of the fruit of *Simum latifolium* L. G. A.
Pauwels and E. I. Karakul. J. Applied Chem. U. S.
S. N. 10, 244 (1960); cf. C. A. 53, 5172. The fruit con-
tains H₂O 74, monosaccharides 8.14, cellulose 10.24, total
N 2.56, alluminous N 2.43, (albumin 15.19), fatty oil
21.84 and essential oil 0.35%. The fatty oil, du 0.956, acid
no 12.4, sapon. no. 214.3, I no. 111.33, contains 2.2%
unsat. acids, linoleic and oleic acids, which by oxidation
with KMnO₄, gives dihydrostearic acid, m. 113-14°
The nature of the oleic acid is being investigated
Chas. Blane

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Isoomerization of linalool under the influence of activated alkalis (floridin). G. A. Agapovskii, E. I. Anetskaya and M. A. Platonova, *J. Gen. Chem.* (U.S.S.R.) 7, 873 (1947). *d*-Linalool, α , β , γ , δ , ϵ (0.67%), η^2 1.4930, δ [α] -12.02° is isomerized with HCl-activated floridin (I) in a stream of CO₂ at 15–16°C for 30–60 min., given among other products *l*-terpinol, α , β , γ , δ (2.20%), *d*-terpin hydrate, α , β , γ , δ (1.14–1.15%), a mixt. of *l*-limonene and dipentene, *l*-pinene, α , β (10.11%), δ (1.6–2.8), η^2 1.4810, δ [α] -1.4930 , δ [α] -7.04° , *l*-isobinenone, α , β (1.73–1.74), η^2 1.4750, δ [α] -5.92° , and a *terpenol* *d*-terpine with 3 double bonds, δ (17.80%), η^2 1.4984 δ η^2 0.9892, δ [α] -1.24° , δ [α] -1.01° , η^2 2.12–2.14, δ [α] -1.01° . The formation of optically active *l*-terpinol under conditions excluding this is postulated as due to a possible asym. centers in the presence of I. Total yield

430.964 METALLURGICAL LITERATURE CLASSIFICATION

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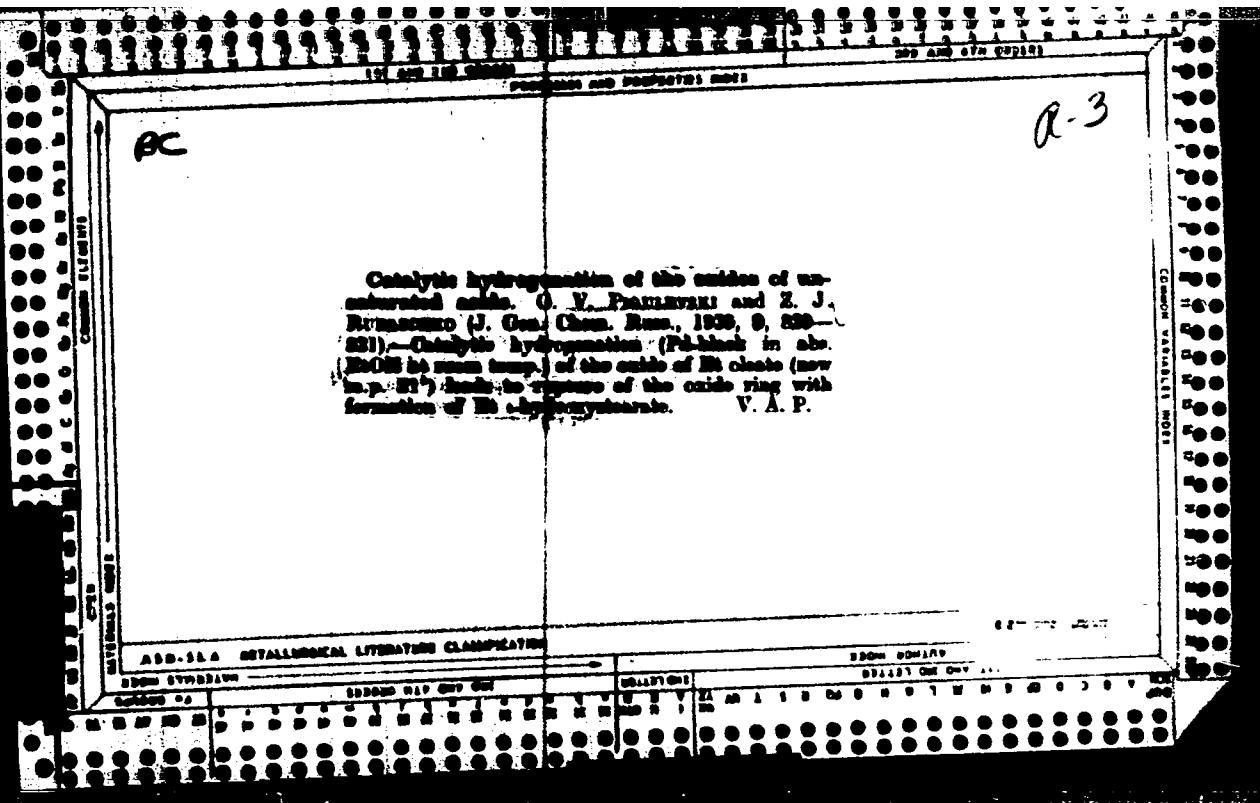
CCU

Isomerism of linoleic acid II. A. V. Pilyavskii and
I. V. Rukityantskii. *J. Gen. Chem. U.S.S.R.* 17,
no. 4 (1967); cf. *C. A.* 66, 2170. Two double bonds in
linoleic acid (II) theoretically permit the existence of 4
isomeric isomers. To determine if natural I and I synthesized
by dehydrogenation of tetrabromostearic acid (possibility
of isomerization during dehydrogenation) contain the same
isomers, poppy seed oil (30 g.) (contg. about 50% I
(10% o-linoleic acid), 28% oleic acid, 7.2% stearic acids,
and 0.5-0.7% unsaponifiable) in EtOH was oxidized with
BzO₂H (2.80% active O, 8% excess) for 5 days, part of
the Et₂O expelled, the soln. dried, Et₂O removed with
5% KOH, the soln. dried, the Et₂O expelled, the residue
(32.13 g.) hydrolyzed, and the acids (30.7 g.) fractionally
crystd. from 60 ml. EtOH to give 11.85 g. dihydroxy
linoleic acid (III), m.p. 78-78.5°, 5.7 g. dihydroxyoleic
acid, m.p. 70.2°, and 13.15 g. of liquid products, mol. wt.
442 (dry titration method), chiefly the liquid isomer of
II. The high mol. wt. data, checked by the F.p. method
could not be explained. Since synthetic I gave practically
analogous results (cf. *C. A.* 66, 2170), the two
preps. of I are concluded to be identical. The oxidation
of I with BzO₂H is an extremely convenient method of
prep. II. John Lysak

Sample method for the separation of free acids from hydrogenated fat. B. G. Shchukina and G. V. Puglevskii. Maslobojnoe Zhitvo Dilo 13, No. 6, 27 (1937).
Promising results were obtained on the separation of free acids in hydrogenated fat mixtures by Pb^{2+} , Cd^{2+} and As^{3+} in HgCl_2 with $\text{Ag}(\text{C}_2\text{H}_5)_2$ and decomposing the Hg salts of the free acids in the filtrate with HCl . The application of this reaction to the determination of free acids is being studied. Chas. Blane

-10

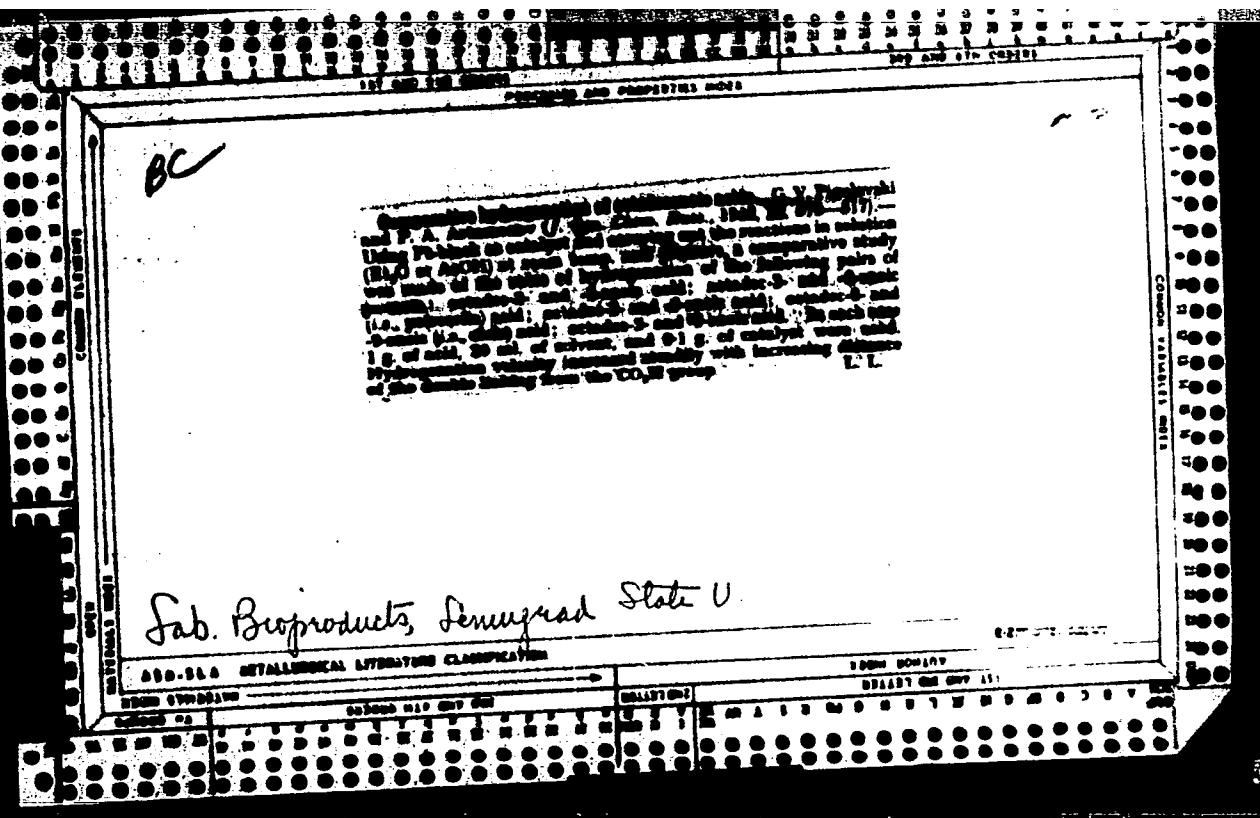
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Petrozavodsk acid. O. Pugachevskii and N. Semenova /
Gra. Chem. (U. S. S. R.) 8, 1023-32 (1939); cf. C. A. 33,
2301.—A number of new derivs. were obtained by the
addn. of H₂O and HBr to petrozavodsk acid (I). To 3.5 g. of
cold concd. H₂SO₄, there was added, with stirring, 10 g.
I. After standing 20 hrs. at 0°, the product was poured
into 2 vols. of ice water. The upper layer was septd. and
subjected to steam distn. for 1 hr. On cooling hydroxy-
stearic acid, Me(CH₂)₆COH(CH₂)₆CO₂H, m. 82°,
septd.; Ba salt, m. 185°; Cu salt, m. 131°; Et ester, m.
37.5°. Gaseous HBr was bubbled through 3 g. I in 20 g.
glacial HOAc and the mist, allowed to stand 4 days. The
reaction product was poured into dil. HOAc. The struc-
ture of the bromostearic acid (II), m. 50.5°, is probably
Me(CH₂)₆CHBrCH₂(CH₂)₆CO₂H. Removal of HBr from
II with alk. KOH gave 13% of 7-octadecenoic acid (III),
m. 52°, I no. 87.9; oxide, m. 56° (from III and AcO/H₂).
dihydroxyester, and m. 122°, was formed by hydration
of the oxide. Besides III, which is the elaidic form of I,
2 other unsatd. acids, m. 31° and 42°, were obtained by
the removal of HBr from II. These apparently represent
a mixt. of the cis and trans forms of I. — H. Priestley

Leningrad State U.

ASB-16A MEDICAL LITERATURE CLASSIFICATION



Benzylidene Cellulose. The crystals of *Lichenite* prepared by G. V. Kostopoulos, *J. Gen. Chem. (U. S. S. R.)* 12, 557-6 (1943) (without summary), are the crystals of *Lichenite* specimen A1, which was found 1.0-2.5% of an essential oil consisting of a part of a complex ester of geraniol acid and of a sesquiterpenoid C_{16} -ether, by 120-7°, $\delta_0^{20} 1.4600$, $n_0^{20} 1.4981$, which is apparently a bicyclic hydrocarbon with 2 double bonds.

G. M. Koenigoff

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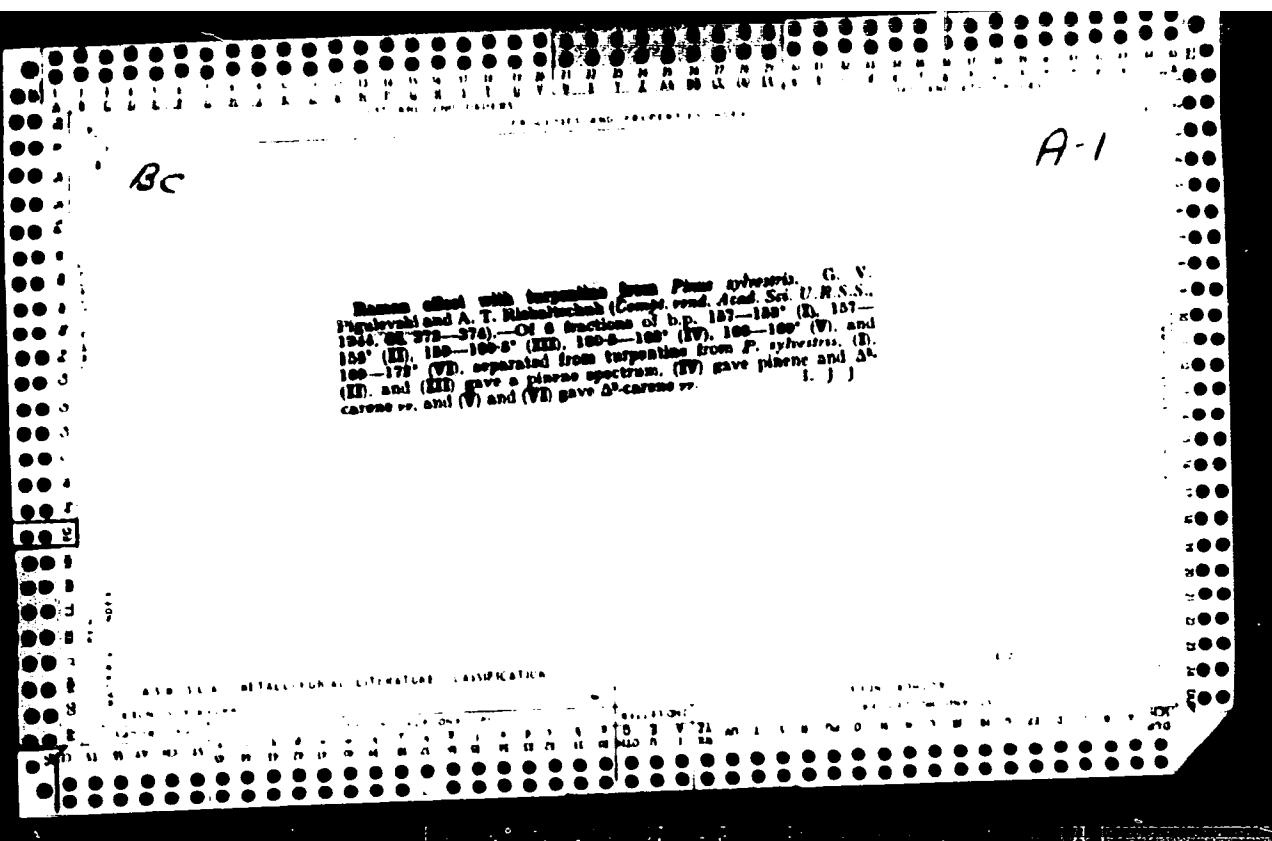
Lab. Bioproduction, Pennylad State U.

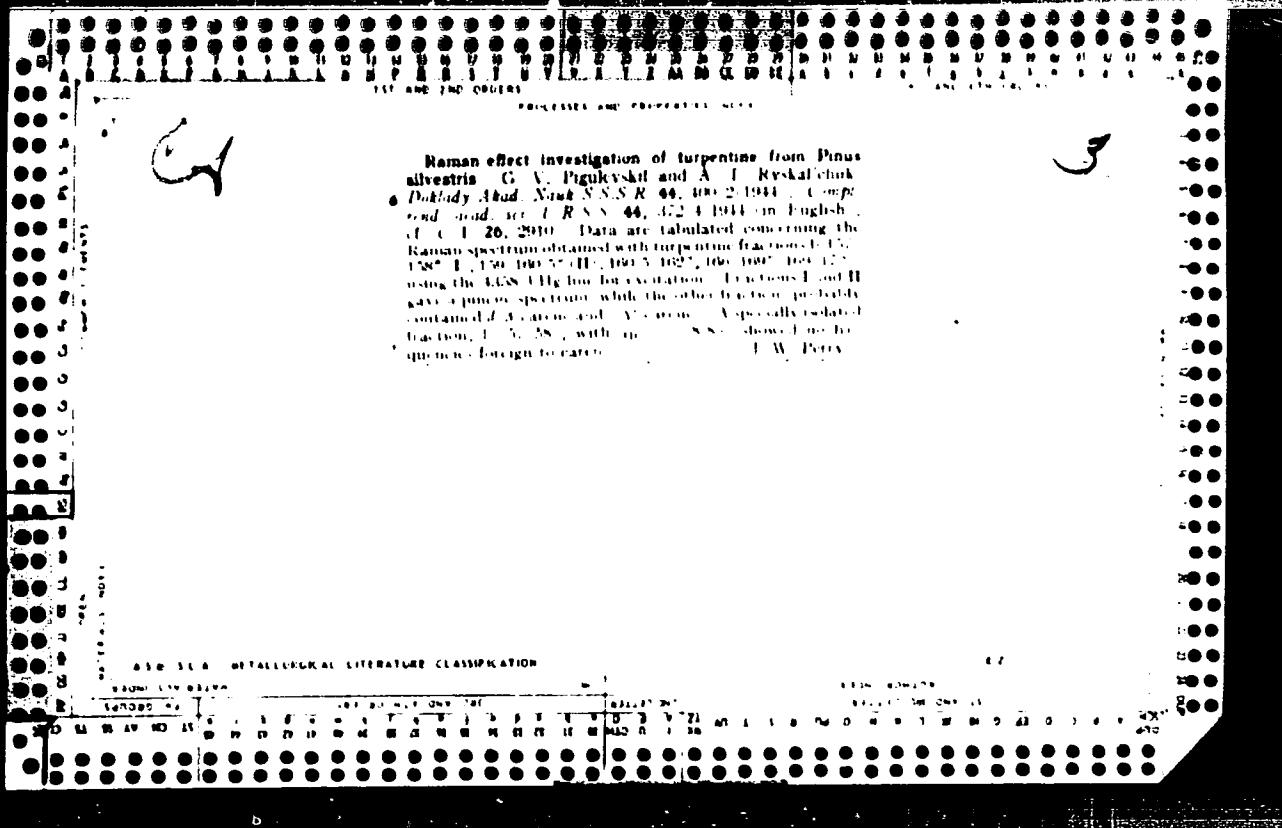
APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012408

Synthesis of substituted amide (hydrogen analog). U. S. V. Pfeiffer, Dabney Abed, Nash S. S. S. R. 20, 267 (1955); *Compt. rend. acad. sci. U. R. S. S.* 60, 23 (1954) (in English). A new process for prep. substituted amide (I) proceeds as follows. Acetamide (II) is made to react successively with NaNO_2 and eq. NH_3OH to form, resp., N -acetylhydroxylammonium chloride and ρ -aminohydroxylamide (III). The latter is hydrolyzed by boiling with HCl (sp. gr. 1.06) for 60 min. The crude hydrochloride of I is filtered off, dissolved in a small amt. of water, treated with activated charcoal and the resulting colorless soln. treated with NH_4OH to pp. cryst. I, which, after washing free of Cl ion, is pure enough for medical use. The yield is 60% of theory based on II. Impure I can be efficiently purified by conversion into its hydrochloride, treatment with activated charcoal, etc., as outlined above. J. W. Perry

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Raman-effect investigation of terpenes from *Pinus sylvestris*. G. V. Piguelyskii and A. T. Rydkalichuk
(Leningrad State Univ.) *J. Gen. Chem. (U.S.S.R.)* 15.

678.83(1943)(English summary) Sov. C. I. 30, 5178
G. M. Kondapalli

Sub Bi-production, Peninsular State U.

[REDACTED]

FIGULEVSKIY, G. V.

FIGULEVSKIY, G. V. and GORBUKVA, I.
Compt. rend. acad. sci. URSS 54, 400-502 (1945) - in French
The "isolimone" of Chugaev.

A: 11-5518

PIGULEVSKIY, G.V., professor.

Distribution of optically active forms of the terpenes in the
plant world. Vest. Len. un. 2 no.2:24-33 F '47. (MLRA 9:6)
(Terpenes) (Plants--Chemical analysis)

The chemical composition of the roots of *Adenophora liliifolia* (G. V. Pygalevskii and L. A. Smirnenskaya) (Acad. Sci., U.S.S.R., Leningrad), *Soviet Botanik* 15, no. 1047, p. 759. The following composition is reported in percentage of the dry wt. for the samples reported in 1943 and 1944 from Kazakhstan: total N 1.03; protein N 0.33-0.35; protein 5.81-5.15; mono-sugars 2.55-3.05; invert sugar 20.20-30.45%; pentosans 13.07-12.61; pectin substances 6.01-6.28%; crude fat 3.61-3.20; cellulose 13.10-11.27%; tannin 7.04-11.44%; ash -6.00%; hygroscopic water 10.49-10.36-11.14%.

M. G. Mose

PIGULEVSKY, G. V.

Pigulevskiy, G. V. "The problem of volatile oils," In symposium: Biokhimiya kul't rasteniy, Vol. VIII, Moscow-Leningrad, 1948, p. 457-78 - Bibliog: p.478

SO: U-3264, 10 April 1953, (Letopis 'Zhurnal 'nykh St tey, No3, 1949)

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1)

The secretion of the numerous rhizome roots of *Praegeria popularis* L. (G. A. Puglinskii and G. A. Kurnitskaya, *Doklady Akad. Nauk S.S.R.* 61, 309-11 (1948).—The roots were extd. with EtOH and the residue from the evapd. ext. was treated with Et₂O. The ext. on standing deposited a substance (I), m.p. 142-42.5°, which corresponds to *oxypodavine*, found in *Pseudogymnocephalum* (see note), its compon. is C₁₇H₂₀O₂, heating with 1 mol. Cu(OH)₂ at 45 min. gave the hydrate, C₁₇H₂₀O₂·H₂O, m.p. 132°, from dil. MeOH). After removal of I, the residue was evapd. and ext. with petr. ether, which on concn. gave a product tentatively identified as *peverdavine*, m.p. 186.5°, after heating with 1 mol. Cu(OH)₂ at 45 min. gave a 3rd substance, C₁₇H₂₀O₂, which after slow evapn. gave a 3rd substance, C₁₇H₂₀O₂, m.p. 183.5° (from 80% EtOH), which appears to be 7-methoxy-4-(3-methyl-2-butyl)benzopyrone. G. M. K.

Botanical Inst. in VL Komarov, AS USSR

Asymmetric synthesis in bisalool derivatives
B. N. Gulyayev and G. V. Markina. Dokl. Akad. Nauk SSSR **63**, 677-80 (1948). Reduced cyclic product
72.1, according to Neves and Bachmann, C₁₁H₂₀,
145091, D₆H₈, δ_1^H 1.627, δ_2^H 0.9410, δ_3^H 0.9430, δ_4^H
hydrogenation with Pt gave the acid derivative. δ_1^H 1.627,
 δ_2^H 0.9252, δ_3^H 0.9410, δ_4^H 0.98. The Raman
spectrum of the latter lacks the 1041 cm⁻¹ line characteristic
of the CH₂CH bond present in the original sub-
stance. The I rotation was not stable and after 4 month
disintegrated to 1.1%. although the unoxidized derivative could
in this respect. Dehydration of the acid derivative by 20%
of iodine gave an unstable anhydride. Calculated there is no evidence
pointing to any one of 3 possible isomers, but 70.2%
of 6. G. M. Kiselevoff

of iodine gave an unstable anhydride. Calculated there is no evidence
pointing to any one of 3 possible isomers, but 70.2%
of 6. G. M. Kiselevoff

PIGULYEVKIY, G. V.

30241

Nikitina, Ye A. Askorbinovaya kisloto v rastyeniyakh iz syemyestva Pinaceae.
Trudy In-ta fiziologii rastyeniy im. Timiryazeva, t. VI, vyp. 2, 1949,
s. 206-09.--Bitliogr: 6 nazv.

SO: LETOPIS' NO. 34

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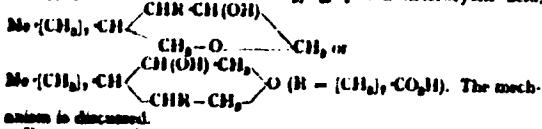
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eA

Raman scattering in the chemistry of natural compounds
G. V. Papaturov (Leningrad Univ.). Izv. Akad. Nauk
S.S.R., Ser. Fiz., 14, 401-3 (1950). Isoborneol was
fractionated from limonene and the purity of the fraction
was checked spectroscopically by the intensity of Raman
lines 1643 and 1676 cm.⁻¹. This method proved to be more
sensitive than the chem. method. Raman spectra show
that reaction of limanol with SOCl₂ and PCl₅ in petr. ether
leads to geranyl chloride, whereas direct action of PCl₅
gives isobutyl chloride. Raman lines of Me esters of linoleic
acids obtained from sunflower oil, from the tetrabromide,
and from the tetrabromide in pyridine show that a 2nd fre-
quency for the double bond, appearing in synthetic linoleic
acid, is absent in the spectrum of the oil; this indicates
isomer formation on synthesis. S. Pakower

1951

reaction of oleic acid with bromine-boron. G. V. Pugachevsky and M. G. Tatarskaya (*J. Russ. Chem. USSR*, 1930, **22**, 1630—1637 (U.S. transl., 1817—1827)).—Oleic acid and $\text{Cl}_2\text{B}_2\text{O}_3$ in presence of H_2SO_4 give a product, $\text{C}_{17}\text{H}_{32}\text{O}_2$, which furnishes an ester, $\text{C}_{17}\text{H}_{32}\text{O}_2(\text{CH}_2\text{CO}_2\text{Et})_2$; CO_2Et and a Cl deriv., $\text{C}_{17}\text{H}_{32}\text{O}_2(\text{CH}_2\text{CO}_2\text{Et})(\text{CH}_2\text{Cl})_2$. Oxidation of the compound $\text{C}_{17}\text{H}_{32}\text{O}_2$, alkene a keto-acid, $\text{C}_{17}\text{H}_{32}\text{O}_2(\text{CO}_2\text{H})\text{CO}_2\text{H}$ and its dehydration gives the unsaturated keto-acid, $\text{C}_{17}\text{H}_{32}\text{O}_2(\text{CH}_2=\text{CH}_2\text{CO}_2\text{H})\text{CO}_2\text{H}$, converted to the keto-aldo-acid, $\text{C}_{17}\text{H}_{32}\text{O}_2(\text{CH}_2\text{CHO})\text{CO}_2\text{H}$, and the keto-hydroxy-acid, $\text{C}_{17}\text{H}_{32}\text{O}_3$. It is concluded that $\text{C}_{17}\text{H}_{32}\text{O}_2$ is a heterocyclic acid.



Portionwise addition of H_2SO_4 (*d* 1.84) to 36–38% CH_3CO_2H cooled to $\sim -17^\circ$ is followed with dropwise addition of citric acid (obtained from almond- or apricot-oil) and used with or without purification to the resulting mixture at $\sim -5^\circ$ to -10° . The mixture is stirred for a day at room temp. and for 3 days at 40 – 50° . The reaction mixture is poured into eq. $NaCl$ and the resulting brown org. material is heated with 2% H_2SO_4 and $NaCl$ to remove CH_3CO_2 -polymers. The dough-like mass is washed with eq. $NaCl$ and then repeatedly shaken with light petroleum giving a voluminous white residue, $C_{10}H_{12}O_6$, (I) (30%), m.p. 115–117°, hardening temp. 112–110°. Acetylation shows it to contain 1 alcohols OH group. Treating I with boiling 5% HCl –EtOH affords the *Ei* ester, $C_{10}H_{12}O_5$ (38%), m.p. 70–71°, hardening temp. 70–88°, mol. wt. (ebullio-scopy) 388, 384.6, which contains 1 alcohols OH group (Zveritinov).

I is oxidized by Cr_2O_7 in AcOH at room temp. to the heterocyclic keto-acid, $\text{C}_{10}\text{H}_{10}\text{O}_5$, m.p. 64–65°, melting point 58–57°, mol wt. (by titration) 332.4, 332.3, which appears to contain 1 alkoxylic OH group, possibly by reason of epoxidation, it yields a non-cryst. ester, $\text{C}_{10}\text{H}_{10}\text{O}_5\text{N}_2$, a semicarbazone, $\text{C}_{10}\text{H}_{10}\text{O}_5\text{N}_2$, m.p. 146–147°, and an *EI* ester, $\text{C}_{10}\text{H}_{10}\text{O}_5\text{Cl}$, m.p. 23–27°. I and PCl_5 in CHCl_3 , first at room temp., and then at 100°, give the non-cryst. product, $\text{C}_{10}\text{H}_{10}\text{O}_5\text{Cl}$, converted by boiling $\text{KOH}-\text{EtOH}$ into the unsaturated acid, $\text{C}_{10}\text{H}_{10}\text{O}_5$ (**II**), b.p. 240°/14 mm. (*Ba* salt, $(\text{C}_{10}\text{H}_9\text{O}_5)_2\text{Ba}$). An unsaturated acid with similar properties is formed in lower yield by dehydrating the OH-acid by P_2O_5 or distilling it under 25 mm pressure. **II** is slowly hydrogenated (Raney Ni) in EtOH or Pd black in Et_2O to an apparently saturated liquid acid, which becomes partly cryst. (m.p. 39–40°) after several months; analysis of both portions agrees with the formula, $\text{C}_{10}\text{H}_{10}\text{O}_5$. In CHCl_3 there is a rapid absorption of 1 mol. of O_2 by the acid, followed by the much slower absorption of a second mol.; a mol. of O_2 is also adsorbed. The resulting oxonide appears stable to hot H_2O . It is partly decomposed by steam and the residue is boiled with alkali. The total product volatile with steam is shown by fuchsin– H_2SO_4 , and $\text{Ag}_2\text{O}-\text{NH}_3$ to contain aldehyde; the amount is too small for examination. The product which is not steam-volatile has the composition $\text{C}_{10}\text{H}_{10}\text{O}_5$, mol. wt. 324, 327 in freezing chamber, 326.7, 326.8 by titration (semicarbazone, subl); $\text{C}_{10}\text{H}_{10}\text{O}_5\text{N}_2$, m.p. 229–229.5°, liquid, $\text{C}_{10}\text{H}_{10}\text{O}_5\text{N}_2$.

CH

26

The composition of terpenes from the exudate of *Pinus sibirica*. G. V. Puglakikh and S. V. Netupskaya (editors). *V. Applied Chem. U.S.S.R.* 23, 705-72 (1950) (Engl. translation).—Observations, collected in August, 1948, (sample 1) and in August, 1947 (sample 2), in the Altai District, Trans-Siberian region, had, resp.: d₂₀²⁰ 1.005, 1.007; n_D²⁰ 1.520, 1.521; [α]_D -14.0°, -10.8°; acid no. 118, 120; sapon. no. 121,

129; iodine no. 217, 216; resin acids (Wolff method) 77.0, 77.5%; unsaponifiables 6.5, 7.4%; terpene (I) 21.3, 21.8%. The difference in the optical activity of the oleoresins was much more distinct in the I resulting by their saponification: d₂₀²⁰ 0.9800, 0.9805; n_D²⁰ 1.4702, 1.4701; [α]_D -0.87°, +0.07°; [α]_D -1.63°, +7.05°; [α]_D -2.04°, +12.62°; ω/ω_0 2.35, 2.10; acid no. 0.81, 0.82; sapon., no. 3.90, 3.06. In the Engler fractionation both I dried largely from 150° to 180°. Both I were fractionated under reduced pressure in a column (2 m. high, 4.5 cm. diam.) packed with Al rings (5 mm. diam.) at the rate of 100 g./hr. and later 60-80 g./hr., were septed, into fractions, and the b.p., d₂₀²⁰, n_D²⁰, [α]_D, and [α]_D' of the fractions were determined. This remained a no. of zones, the largest of which was the first (A). Distillation of zone A (67-72%) yielded α -pinene with its b.p., d₂₀²⁰, no., ref. rotation, [α]_D, [α]_D', [α]_D'', and ω/ω_0 : saponide 1.180-0°, 0.9800, 1.4600, 43.81°, -2.80°, -3.63°, -5.66°, 1.03; saponide 2, 151.5°, 0.9800, 1.4600, 43.74, +3.08°, +3.97°, +5.98°, 1.03. The pinenes gave a nitrosochloride, m. 102°, and were oxidized with KMnO₄ to pinonic acids (8.2 and 8.8 g., resp., from 20 g. saponide) which melted

at 103-4° and 102-3°, resp. The first pinonic acid had [α]_D -0.2°, [α]_D' -0.20°, [α]_D'' -0.42°, and the second had [α]_D 0.13°, [α]_D' 0.17°, [α]_D'' 0.23°; they yielded neocamphanes (m. 203° and 203°) and camphene (m. 163°). The pinenes are present in their racemic state. Distillates of zone B (9-11%) yielded β -pinene of nearly identical properties in both samples (b. 102-4°, d₂₀²⁰ 0.9845, n_D²⁰ 1.4745-6, ref. rotation 44.20-8; [α]_D -8.33°, -7.60°; [α]_D -9.80°, -9.85°; [α]_D -11.71, -10.61; ω/ω_0 1.37, 1.38). This was further identified by Raman frequencies at 641, 848, 878, and 1640 cm.⁻¹, but other frequencies indicated the presence of Δ^2 -carene. Oxidation of the fractions (20 g.) with KMnO₄ yielded 0.6 g. neopinic acid (m. 123°, 123°, from alk.). Camphene (m. 52°) was also isolated from zones A and B by way of isoborneol (made with the Bertram-Wallbaum reaction) and dehydrogenation of this intermediate product. Zone C (9-10%) was reduced, over metallic Na, yielding δ - Δ^2 -carene, [α]_D 16.76°, n_D²⁰ 1.4708, d₂₀²⁰ 0.9843 by a special treatment, or fractions rich in it. The Raman spectrum of these fractions showed the following frequencies typical of carene: 422, 512, 564, 678, 780, 818, 1360, 1376, and 1600 cm.⁻¹. An impurity giving a bright frequency of 1637 cm.⁻¹ was also present. The presence of Δ^2 -carene was proved by the trans. of the

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Chemical composition of the essential oil of *Heracleum montezanum*. G. V. Puglyevskii and V. I. Kovaleva
Zhur. Prilich. Khim. i Izh. Akad. Nauk SSSR, No. 10, p. 1130 (1964). Steam distillation yields the essential oil in 8.2% yield from the fruit of the plant. The oil ($d_4^{20} = 0.8632$; $n_{D}^{20} = 1.4225$; $\eta_{D}^{20} = 2.06$) has an acid no. 2.3; ester no. 201 has no aldehydes but contains unsatd. compounds. Fractionation and sapon. of the product showed that it is composed largely of esters of octyl alc. and to some extent of hexyl alc. The acids found include AcOH, butyric or isobutyric acid, and optically active isovaleric acid. G. M. Kosolapoff

61

7

Chemical composition of turpentine from the oleo-resin of Pinus sibirica, Dmytrenko, M. G., V. P. Pavlovsky and N. V. Novopashays (J. off. J. Chem., U.S.S.R., 1960, 65, 730-731).—The turpentine was obtained by steam-distillation of the oleo-resin from Tomsk district. The turpentine is a mixture of terpenes, its main component being α -pinene (67-72%). The different specimens contain either L- or D-pinene and also L- β -pinene (0-11%), camphene, and D- Δ^4 -caryene (0-10%). Altogether 26 fractions from vac.-distillation have been investigated; they can be divided roughly into 4 groups. In the first α -pinene prevails, in the second β -pinene, myrcene, and Δ^4 -caryene have been found, in the third the presence of Δ^4 -caryene was proved by the synthesis of its nitronate (m.p. 130-140°). In this group also another terpene is present which gives a nitronate, m.p. 155°, and a cryst. condensation product with maleic anhydride, m.p. 210°. In the fourth group besides Δ^4 -caryene, dipentene and some unknown terpene are present. The turpentine contains about 1% of alcohols.

J. H. J. ZARA

C. A.

Study of the reaction of isopropyl chloride and phosphorus trichloride with imidole by means of the Raman effect
G. S. Pigulevskii and G. B. Troynik, *Doklady Akad. Nauk SSSR*, **72**, 519-522 (1950). Imidole (from camphor oil), b_1 , 85.7°, d_4^{25} 0.9040, n_D^2 1.40232, on 14.32°, showing only 1645 and 1673 cm^{-1} Raman lines for its double links, treated with SOCl_2 in pyridine below 3° (mostly at -2°) to 4°; 4 hrs and quenched with cold water after 1 hr on a water bath, gave 32% $\text{C}_5\text{H}_7\text{Cl}$, b_1 , 102.4°, d_4^{25} 0.9317, n_D^2 1.4708, $\mu_{\text{D}} = 1.01$, giving 724, 1005, 1144, 1251, 1379, 1446, and 1670 cm^{-1} Raman shifts with complete disappearance of the 1645 cm^{-1} frequency (primary to secondary C double link), hence, the product underwent the expected allylic link. Hence, the product underwent the expected allylic link. Addn. of 30 ml PCl_3 to 100 g. imidole over 5 hrs at -2° to 2° until expt. (11.1%) formed, upon fractionation of the top layer 29 g. 20.4% v.v. CH_2Cl_2 , b_1 , 91.5°, d_4^{25} 0.9146, n_D^2 1.48063, $\mu_{\text{D}} = 0.75$, giving 614, 711, 1248, 1345, 1425, 1641 and 16.4 cm^{-1} Raman shifts, i.e., different from the above chloride and corresponding to $\text{Me}_2\text{CHCH}_2\text{CCl}(\text{Me})\text{CH}_2\text{CH}_3$, confirmed by ozonolysis of both specimens - the 1st gave no HCO_2H and gave Me_2CO , the 2nd gave both. PCl_3 (60 g.) added to 80 g. imidole in 300 ml. petr. ether with cooling over 0 hrs. gave 31.0% $\text{C}_5\text{H}_7\text{Cl}$ which was essentially pure geranyl chloride with a small admixt. of difficultly removed terpenyl chloride causing a moderate alteration of the phys. constants (b_1 , 95.7°, d_4^{25} 0.9205, n_D^2 1.47901, $\mu_{\text{D}} = 0.75$). The observation of Vannu and Chernoyarova (C. A. **31**, 5757) is thus confirmed. — M. Kosolapoff

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U720513R0012408

Clarification of the structure of linoleic acid by Raman spectra. G. V. Pugakyanili and I. N. Naldenova. Doklady Akad. Nauk S.S.R. 72, 717-19(1960).—The Raman spectrum of the Me ester of the acid of natural linoleic oil, containing 20% linoleic acid, shows only one double-bond frequency 1697 cm.⁻¹, and no line at 1643 cm.⁻¹, which, however, does appear in the linoleate synthesized from the trioleinamide according to Robins (C.A. 46, 1955). Evidently, R.'s dehydrogenation procedure results in partial isomerization which is responsible for the 1643 cm.⁻¹ line. If the dehydrogenation of the linoleic acid trioleinamide is effected in C₂H₅N soln., i.e., under mild conditions, the 1643 cm.⁻¹ frequency does not appear in the spectrum of the Me ester. Natural linoleic acid is a cis isomer, with only one double-bond Raman frequency at 1697 cm.⁻¹. The band frequency 1659 cm.⁻¹ (close to 1643) found by McCutcheon, et al. (C.A. 55, 16547) is undoubtedly due to partial isomerization. N. Thon

10

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Preparation of triglycerides of hydroxy acids G. V. Piguelyevskii and T. A. Starostina (A. Zhdanov State Univ. Leningrad). Dzheladji Akad. Nauk SSSR 70, 261-2 (1951), cf. C.I. 34, 378². Treatment of 100 g peach oil (in 200 ml EtOH) with 0.5 ml AcOH in EtOH gave after 16 days 87 g product, m.p. 44.5°, which on hydrogenation over Pt gave 3-palmito-1,2-stearin or the isomeric 2-palmito-1,3-stearin, m.p. 62.4° (from EtOH). Saponification with alk. NaOH gave palmitic acid, m.p. 62°, and α -hydroxystearic acid, m.p. 112°, in 1:2 ratio. Hence peach oil contained palmito- α - ω -₂ in 1:2 ratio. Hence peach oil contained palmito-

1952

PIGULEVSKIY, G.V.; SOKOLOVA, A.Ye.

Reduction of oleic acid oxide and oleyl alcohol oxide by lithium aluminum hydride. Zhur. org. khim. 34 no. 11 p. 1651 My '64.

Reduction of petrose vinyl and erucyl aldehydes by lithium aluminum hydride. Ibid. 16:1-165 "MIRA 1964"

1. Leningradskiy gosudarstvennyy universitet.

PIGULEVSKIY, G.V.; ARTAMONOV, P.A.

Comparative hydrogenation and oxidation of octadecenoic acids.
(MLRA 5:8)
Zhur. Obshchey Khim. 22,1140-3 '52.
(CA 47 no.14:6865 '53)

1. PIGULEV, G. V., ROSTOMYAN, Ye M.
2. USSR (600)
4. Ricinoleic Acid
7. Preparation of oxide of ricinoleic acid. Zhur. ob. khim ?? no. 11, 1951.

9. Monthly List of Russian Accessions, Library of Congress, March 1951. Unclassified.

PIGULEVSKIY, G. V.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Organic Chemistry

Preparation of the oxide of trichloroacetic acid. G. V. Pigulevskiy,
V. M. Kostomarov, J. Russ. Chem. U.S.S.R. 22,
2000-4 (1932) (Engl. translation).—See C.A. 47, 9201e.
H. L. H.

② Chen

MA

PIGULEVSKIY, G. V.

Infrared-Metallic Compounds

Reaction of ammonia with an oxide of zinc. Dokl. AN SSSR, 2, N. 4, 1954.
Laboratoriya Prirodnykh Soyuzov imeni Lenina po ego Sosudarskym Uchenym Itm
im. A.A. Shchadnova rad. 32 Nov. 1951

Monthly List of Russian Acquisitions, Library of Congress, Jun 1954. Vol. 11, No. 1.

3A

CA

Cis-trans isomerism of unsaturated higher fatty acids.
G. V. Zhdanov and P. A. Artamonov (A. E. Zhdanov State
Univ., Leningrad). Doklady Akad. Nauk S.S.R. 22:
413-14(1958).—Raman analysis of Me crotonate and brassi-
date gave the following characteristic lines, resp.: 314(0.8),
1304(0.5), 1441(0.8), and 1636(0.5) for the former, and
318(0.25), 1304(0.8), 1443(0.8), and 1639(0.5) for the latter
(in cm.⁻¹). Hence croton acid is a trans isomer, confirming
x-ray analyses. Raman analysis of brassidic acid showed
the lines at 1648 cm.⁻¹, for crotonic acid 1636, for Me iso-
crotonate 1641; and for Me crotonate 1634. Hence, cro-
tonic acid, being trans form, gives a 7 cm.⁻¹ enhancement
over the isocrotonic acid. The Raman lines in CCl₄ were
also divid. for the following: Δ¹-hexadecenoic acid, 1637
(0.8); Δ¹-octadecenoic acid, 1281(0.5), 1444(0.25), and
1639(0.8); Δ¹-decadenoic acid, 1304(0.25), 1443(0.25), and
1639(0.8). Hence, the frequency of the Raman line for C:C
link is not only greater than seen in the cis form, but even
higher than observed for a trans acid (crotonic). It is lower,
however, than found in elaidic and brassidic acids. The
effect is probably the result of conjugation. The indications
are in favor of trans structures of the above acids, prep'd. from
corresponding α-bromo acids. Elucidation of all these
trans acids failed with Br and HNO₃. G. M. Kosolapoff

PIGULEVSKIY, G.V.

Remarks concerning the article by Houlihan, Levy and Mayer on the
structure of alcohol obtained by the hydration of myrcene.
Zhur. ob. khim. 33 no.7:2424-2425 Jl '63. (MIRA 16:8)

1. Leningradskiy gosudarstvenny universitet.
(Myrcene) (Hydration) (Alcohols)

PIGULEVSKII, + /

Chem. 6

(3)

Reaction of ammonia with limonene monoxide G. A.
Pigulevskii and V. I. Khokhryakov (A. A. Zhdanov State

Univ., Leningrad). Doklady Akad. Nauk S.S.R. 87, 770-81 (1952).—Heating 8 ml. of limonene 1,2-monoxide (b.p. 84°, d₂₀ 0.9290, [α]_D²⁰ 44.98°) with 25 ml. 25% NH₄OH in sealed tube 3 hrs at 125° gave 70% C₁₀H₁₆O.N, the hydroxylamin derivative, being a viscous liquid, b.p. 135°, d₂₀ 1.0071, n_D²⁰ 1.50285, [α]_D²⁰ 16.03°. The product has a primary NH₂ group and OH us shown by Zerevitinov detn of active H, but whose NH₂ group is rather unreactive since 115° was necessary for reaction with MeMgX. Apparently the product is 2-amino-Δ⁴-p-menthen-1-ol. The product crystallizes from H₂O as pentahydrate, needles, which lose H₂O *in vacuo* or on heating above 84°, the hydrate absorbs CO₂ from the air, forming C₁₀H₁₆O(OH)(NH₂)·0.5H₂O. m. 95-7°, which loses CO₂ on boiling in H₂O. Treatment of aq. soln. of the amino alc with 10% H₂SO₄ yields C₁₀(OH)₂NH₂·0.5H₂O, m. 231.3° (from EtOH-Et₂O). G. M. Esolatoff

C.A. V-48
Jan 10, 1954
Organic Chemistry

GORYAYEV, M.I., PIGUL'EVSKIY, G.V., redaktor.

[Characteristics of chemical compounds going into the make-up of
essential oils] Kharakteristika khimicheskikh soedinenii vkhod-
shchikh v sostav esfirnykh masel. Alma-Ata, Akademija nauk Kaz-
akhskoi SSR, 1953. 371 p.
(Essences and essential oils)

PIGULEVSKIY, G.V.; KUZNETSOVA, G.A.

Structure of a new furocoumarin of prangenin. Zhur. ob. khim. 23 no.7:1237-
1239 Jl '53. (MIRA 5:7)

1. Botanicheskiy institut imeni V.L.Komarova Akademii nauk SSSR.
(Coumarin) (Prangenin) (Prangos pubularia)